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STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
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July 3, 1997

Mr. Tim Rehder
U.S. Environmental Protection Agency, Region 8
999 18th Street, Suite 500, 8HWM-FF
Denver, CO 80202-2405

Dear Tim:

We have attached a list of our comments the **Draft Mound Site Plume Decision Document,** dated June 16, 1997. It is our opinion that this document presents inadequate information for this decision. It does not present the recent investigation in sufficient detail nor does it integrate previous information into a coherent conceptual model with visual documentation.

This document needs revision before any further decisions are made to go ahead with this project. This is the public record for this project. It should be clearly written and supported with readable maps and cross sections. The extent of contamination should be defined in the alluvium/colluvium and in the Arapahoe sandstone. The relationship of the intercept system to the plumes in both parts of the UHSU must be shown.

Should you or your staff have any questions please contact Carl Spreng, 692-3358 or Elizabeth Pottorff, 692-3586.

Sincerely,

Susan Chaki
Corrective Action Unit

enclosure

cc: Gail Hill, DOE-RFFO
Christine Dayton, K-H
Gary Kleeman, EPA
Steve Tarlton
Norma Castañeda, DOE-RFFO
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Laura Perrault, AGO

Colorado Department of Public Health and Environment
Division of Hazardous Materials and Waste Management

comments on

Mound Site Plume Decision Document (Draft)
June 16, 1997

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1. This document or another report needs to bring together the current understanding of the hydrogeology of this site. The referenced reports are old or incomplete with respect to the relationships between contaminant source, contaminant pathway and the current plan. The conceptual model on which this remedial project is based needs to be thoroughly presented in a publicly available document. ✓

2. Section 3.3
The conceptual model should be supported with cross sections and maps at a readable scale of the hydrogeology of this site. Show the discharge relationships between the seeps and the plume in the colluvium. Cite local well information regarding the low permeability of the claystone. Show the spatial relationships of the seeps to the subcropping geology. x-section Figure 2

Provide a head map of the area around seep SW059 showing all sources of water to this seep. It would appear from general maps that there are sources from the west. Document all unsaturated areas with supporting data.

3. Sections 3.3 and 3.4
On pages 7 and 8, the term "Number One Sandstone" is used. This terminology conflicts with the name, Arapahoe No. 1 Sandstone, used earlier on page 6 and in previous reports. ✓

4. Section 3.3
The location of the interceptor trench on Figure 1 does not correspond to the statement at the end of Section 3.3 that, "groundwater interception will occur between geoprobe holes 10297 and 11097." ✓ new figure 2

5. Section 3.4
According to the first paragraph of this section, the relationships between the seeps and subcropping geology is unclear. These relationships, however, are key to the location of the intercept system. These seeps should be located on a map showing their relationship to the subcropping bedrock. Neither of the references listed is adequate to support the conceptual model that should be developed and confirmed with the results of the 1997 investigation. Reference new maps/conceptual model in this docum

The source of the VOCs in the Arapahoe sandstone needs to be related to the position of the seeps and the new information from this investigation needs to show the location of the plume in the colluvium. Was contamination in the lower saturated bedrock (i.e. second line of seeps) investigated? Can it be shown that the contamination is entirely in the colluvium or that the weathered portion of the bedrock contains minimal contamination?
Better described in text now (GW reaches surface there

This presentation also needs supporting figures such as cross sections and maps to tie the previously known information to the current investigation and update the conceptual model.

6. Table 3
Ground water background values for uranium and some metals may change depending on the results of additional evaluation by the ground water working group.

Contrary to the footnote concerning the surface water action level for americium, the intent of RFCA on the value of that action level prior to January 1998 is clear. Section 2.2.A.2.b of Attachment 5 clearly implies that the existing standard for nitrate will apply until the temporary modification takes effect in January 1998. The same implication exists for plutonium and americium in Section 2.2.B.1. This is also the understanding of all the stakeholders, including the cities, involved in reaching the decision to postpone applying the new state-wide basic standards to the Walnut Creek drainage until the new water supply replacement for Great Western Reservoir was in place.

7. Section 3.5
A map of the plume should be included in this section.

8. Section 3.6
The statement about background comparisons in the first sentence of the second paragraph is true for groundwater, but not for surface water.

The derivation of seep water background values is unclear. Are seep background values calculated with surface water or separately? Do they correspond to the M2SDs listed in the Background Report?

Background values calculated from unimpacted seep waters and historic values for seep SW059 should be distinguished. The derivation of the seep water background value of 0.5 pCi/l for plutonium is unclear.

9. Section 4.0
Show a map with the alignment of the collection system with respect to the plume. It needs to be clear what portion of the plume will be intercepted. The concentration and volume in the non-intercepted portion of the plume should be documented or estimated. What will the impact of the intercept system be on this portion of the plume?

10. Section 4.1.2

In order to evaluate the adequacy of the treatment system, the design flow volume should be stated.

Testing by Sandia demonstrated the removal capability of the treatment system with respect to metals and radionuclides. The bench scale testing by ETI, however, did not provide influent versus effluent concentration results for radionuclides.

11. Section 4.1.3.2

Groundwater from the cut off plume needs to be monitored as well, the extent and concentration should be determined so that the downgradient impacts can be evaluated. Tier II well 75992 should be evaluated for its appropriateness for long-term monitoring of this area.

12. Table 6

Section 4.1.3.1 states that the influent to the treatment system will be sampled. This sampling is not included in the Table 6 schedule.

13. Table 7

Footnote 1 should state: "Temporary Modification, effective from 3/97 to 12/09."